PTC-16
Programmable Timing Controller
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WARNING: These products are not designed for use in, and should not be used for, human applications.
PTC-16 Programmable Timing Controller

FRONT PANEL FUNCTIONS

PRG mute
Accesses set points (SEL1 & SEL2) when pressed momentarily. Accesses Password (PASS) when pressed for 4 secs. Steps through program functions after password entry. Cancels output buzzer (BEEP) when activated but does not reset the timer.

SEL reset
Restarts the timer when pressed momentarily if on or off reset options have been selected. Enables adjustment of each digit using the A and V buttons when pressed after password entry.

Enables set point 1 (SEL1) to be viewed when pressed momentarily. Increments a parameter value or program option if used after PRG and SEL buttons.

Enables set point 2 (SEL2) to be viewed when pressed momentarily. Decrements a parameter value or program option if used after PRG and SEL buttons.

WIRING DIAGRAM

ML type
12/24 Vac/dc

240 Vac

110 Vac

MHi type
NEUTRAL

1 2 3 4 5 6 7 8 9
OP2
8A @ 240Vac

10 11 12 13

Reset / Start
Hold

3.0V

24hr battery backup (optional - see note 7)

0V

REAR PANEL FUNCTIONS

Hold: Halt timing for as long as the hold input is connected to 0V. Timing re-starts from previous value when hold is released.

Reset/start: Resets or starts the timer according to the rSel parameter setting.

3V Battery: Provides battery back up to maintain the 24 hour clock during power failure.
### PROGRAM PARAMETERS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Function</th>
<th>Default</th>
<th>Range/Options</th>
</tr>
</thead>
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<tr>
<td>SET 1</td>
<td>Timing set-point 1</td>
<td>9000</td>
<td>0 to Timing Range</td>
</tr>
<tr>
<td>SET 2</td>
<td>Timing set-point 2</td>
<td>9000</td>
<td>0 to Timing Range</td>
</tr>
<tr>
<td>PASS</td>
<td>Password to access Program</td>
<td>3232</td>
<td>0 to 4999 for adjustable parameters</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5000 to 9999 for parameter lock (view only)</td>
</tr>
<tr>
<td>MODE</td>
<td>Timing Mode selection</td>
<td>de-1</td>
<td>de-1: On-Delay + Instantaneous</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>de-2: 2 independent On-Delays</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>de-3: Delayed Pulse + Instantaneous</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>de-4: Cycle Timer with adjustable on &amp; off</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>de-5: Independent On-Delays</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>de-6: 2 independent Intervals</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>de-7: Independent On-Delay + Interval</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>de-8: 2 independent Off-Delays</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>24H: 24 hour clock with 2 on &amp; 2 off times</td>
</tr>
<tr>
<td>RNG1</td>
<td>Timing Range selection</td>
<td>SECS</td>
<td>0.1: 0 to 999.9 seconds</td>
</tr>
<tr>
<td>RNG2</td>
<td>Timing Range selection</td>
<td>SECS</td>
<td>SECS: 0 to 9999 seconds</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MINS: 0 to 99 minutes</td>
</tr>
<tr>
<td>CNT</td>
<td>Direction of Timing Countdown</td>
<td>uP, dP</td>
<td>M-S: 0 to 99 minutes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>RSET</td>
<td>Reset options with RST button</td>
<td>OFF</td>
<td>(23 h 59 m in 24H mode)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>uP: on</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>dP: off</td>
</tr>
<tr>
<td>AST</td>
<td>Auto-Start mode</td>
<td>ON</td>
<td>ON: Timer starts from switch on.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OFF: Timer waits for Start/Reset signal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>when button inactive</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>When Restart only after time-out</td>
</tr>
<tr>
<td>BEEP</td>
<td>Action of Buzzer at Time-out</td>
<td>OFF</td>
<td>Extern: External Unconditional Restart</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Extern: External Restart only after time-out</td>
</tr>
<tr>
<td>BUTT</td>
<td>Allows beep on key press to be switched on or off</td>
<td>ON</td>
<td>OFF: on</td>
</tr>
<tr>
<td>CLOC</td>
<td>Sets the 24 hour clock</td>
<td>00:00</td>
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</tr>
<tr>
<td></td>
<td>On and Off time settings in</td>
<td>00:00</td>
<td>24 hour mode</td>
</tr>
</tbody>
</table>

### TIMING MODES

- **de-1**: On-Delay + Instantaneous
- **de-2**: 2 independent On-Delays
- **de-3**: Delayed Pulse + Instantaneous
- **de-4**: Cycle Timer with adjustable on & off
- **de-5**: Independent On-Delay
- **de-6**: 2 independent Intervals
- **de-7**: Independent On-Delay + Interval
- **de-8**: 2 independent Off-Delays
- **24H**: 24 hour clock with 2 on & 2 off times
Note: These routines apply to programming from default values. Once another set-up has been programmed, parameters will start from the previous settings.
**PROGRAMMING PROCEDURE**

The operating parameters and range should be set before adjusting the set time.

1. Press and hold the PRG button for > 4 secs and the display will show PASS (if a password >0 has been set). Press SEL and use the Λ and V buttons to enter each digit of the password. Use SET to move between password digits. When complete press PRG to access the program functions. NOTE: if no password is set (PASS=0) the display will go directly to the first program parameter (Mode).

2. Press SEL followed by the Λ or V buttons to change program parameters. Press PRG to store the changes and move to the next parameter. Refer to the parameter map for programming details.

3. End will be displayed when the program routine is complete. The power must now be removed and reconnected to re start the timer.

**ADJUSTING SET TIME**

1. Momentarily press the PRG button and the display will show set time 1 (SEI).

2. Press SEL and use the Λ and V buttons to enter the required set time, one digit at a time. Use SET to move between digits.

3. Press PRG to display set time 2 (SEI) if selected. If a single time mode is selected (de_1 or dp_1) then the display will return to normal timer operation.

4. Repeat step 2 to set time 2.

5. Press PRG to return to normal timer operation.

The same procedure is used to set the 24 hour clock time (CLOC) and the on and off times (on_1, OFF_1, on_2, OFF_2).

**NOTES**

1. The RST button can only be used to start the timer if the rSEI modes u on or t on are selected.

2. The SEI mode u on will allow the timer to re start at any point in the timing cycle but t on will allow re start only after the current timing routine is finished.

3. The SEI modes u on and t on have the same function as u on and t on but they are actioned by contact across terminals 7 and 8.

4. If the buzzer sounds during set point adjustment, the set point routine must be exited before the buzzer can be silenced using the PRG/mute button.

5. When the program routine has been accessed timing stops and resets and all outputs are deenergised. Timing continues during set time adjustment but the new times will only take effect when the timer is next started.

6. The buzzer sounds when Time 1 has elapsed if the bEEP on option has been selected (not dd_2 mode).

7. For the 24 hour clock battery back up to function correctly, the battery must be connected after the main power supply is switched on.

8. All time settings and mode settings are stored in EEPROM memory and are retained when the unit is powered down.

**DIMENSIONS**

Panel cut-out 2755 x 1.770 (70 x 45)
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